

FILM INSULATIONS

INSULATION	RATING	AWG	ADVANTAGES	CONSIDERATIONS
Polyvinyl Formal	Class 105 MW 15-C	14 - 50	<ul style="list-style-type: none"> - Excellent abrasion resistance - Excellent compatibility with transformer oils - Good electrical properties - Used in Cryogenic Applications 	<ul style="list-style-type: none"> - Must be stripped before soldering - Should be annealed before application of varnish
Polyurethane	Class 155 MW 79-C	30 - 50	<ul style="list-style-type: none"> - Excellent electrical properties for high Q coils - Easily solderable 390°C/360°C 	<ul style="list-style-type: none"> - Not recommended for applications with the possibility of severe thermal overload
	Class 180 MW 82-C	24 - 50	<ul style="list-style-type: none"> - Excellent film adhesion & flexibility - Good moisture & chemical resistance 	
Polyurethane-Nylon	Class 155 MW 80-C	10 - 46	<ul style="list-style-type: none"> - Good electrical properties - Easily solderable 430°C/390°C - Excellent film adhesion & flexibility - Improved chemical & mechanical resistance from nylon topcoat 	<ul style="list-style-type: none"> - Not recommended for applications with the possibility of severe thermal overload - Nylon topcoat is hygroscopic
	Class 180 MW 83-C	25 - 46	<ul style="list-style-type: none"> - Nylon overcoat provides low coefficient of friction 	
Solderable Polyester	Class 180 MW 77-C	14 - 50	<ul style="list-style-type: none"> - Solderable 470°C - Excellent thermal properties - Good electrical properties - Good compatibility with varnishes & solvents - Improved thermal overload - Good moisture resistance 	<ul style="list-style-type: none"> - Low abrasion resistance compared to Nylon & amide imide topcoat materials - Preheat before varnishing is recommended
Solderable Polyester Nylon	Class 180 MW 78-C	14-50	<ul style="list-style-type: none"> - Solderable 470°C - Excellent thermal properties - Good electrical properties - Good compatibility with varnishes & solvents - Improved thermal overload - Good moisture resistance - Nylon overcoat provides low coefficient of friction 	<ul style="list-style-type: none"> - Nylon topcoat is hygroscopic - Preheat before varnishing is recommended
Polyester(amide)(imide)	Class 200 MW 74-C	34 - 44	<ul style="list-style-type: none"> - Excellent flexibility & abrasion resistance - Excellent thermal overload - Excellent dielectric strength - Excellent moisture resistance - Good chemical resistance 	<ul style="list-style-type: none"> - Must be stripped before soldering - Not recommended for use in oil-filled transformers - Preheat before varnishing
Polyester/Poly-amideimide Overcoat	Class 200 MW 35-C	8 - 33	<ul style="list-style-type: none"> - Excellent flexibility & abrasion resistance - Excellent thermal overload - Excellent dielectric strength - Excellent moisture resistance - Good chemical resistance 	<ul style="list-style-type: none"> - Must be stripped before soldering - Preheat before varnishing
Polyimide	Class 240 MW 16-C	10 - 30	<ul style="list-style-type: none"> - Excellent flexibility - Excellent thermal overload - Excellent radiation resistance - Excellent chemical compatibility - High dielectric strength - Adequate abrasion resistance - Low outgas 	<ul style="list-style-type: none"> - Must be stripped before soldering - Must be annealed before varnishing - Will solvent craze

